

## CLAIMS

What is claimed is:

1. A method for emulating on a single display platform an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said method comprising:

combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

providing a simultaneous and consistent display representation for said selected application, thereby providing a stylized rendering of said selected application's interface in a uniform appearance and in which said selected application's interface for a plurality of said target devices can selectively be viewed simultaneously.

2. The method of claim 1, wherein said display representation is synchronized, thereby providing a simultaneous update to all of said selected target device representations when information in a device-independent portion of said formal description is changed.

3. A method for emulating on a single display platform an application's user interface as it would appear on target device, said method comprising:

combining device characteristic information for said target device and a formal description information for said application; and

providing a stylized rendering of said application's interface.

4. The method of claim 3, wherein said device characteristic information is given for a plurality of target devices to be emulated, further comprising:

selecting certain of said plurality of target devices to emulate; and

providing a simultaneous and consistent display representation for said application, thereby providing a stylized rendering of said application's interface in a uniform appearance and in which the application's interface for said selected plurality of said target devices can selectively be viewed simultaneously.

5. A method to emulate on a single display platform an appearance of a user-interface of any of at least one application as it would appear on a plurality of target devices, wherein a set of device characteristics for any said target device to be emulated and a formal description of any said application to be emulated is available in a memory, said method comprising:

retrieving from said memory a device-independent specification information for a user interface for a selected application;

retrieving from said memory a device-dependent information for said selected application for a selected one or more of said target devices; and

combining said device-independent model information and said device-dependent information into a single format for a stylized representation on a display device.

6. The method of claim 5, further comprising:

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forming said display device presentation such that said stylized representation of said plurality of target devices can selectively be viewed on said display device individually or in a simultaneous view involving more than one said target device stylized representation.

7. The method of claim 6, wherein said combining of said device-independent model information and said device-dependent information is synchronized, thereby causing all said simultaneous views to simultaneously change whenever said device-independent specification information is changed.

8. The method of claim 5, wherein said single format is used to render an abstract representation of said appearance of said user-interface for said selected target device.

9. The method of claim 8, wherein said abstract representation comprises a polygonal area for each of a user-interface entity in said user-interface.

10. The method of claim 8, wherein said abstract representation comprises a text field describing a generic content of each of a user-interface entity in said user-interface.

11. The method of claim 5, wherein said selected application comprises a plurality of views for said user interface.

12. The method of claim 11, wherein said presentation can provide a simultaneous view of more than one view of said application user interface.

13. The method of claim 12, wherein said more than one view is presented in one of the following formats:

a tiled layout;

a cascaded layout; and

a one-at-a-time layout having operator selection to select a view.

14. The method of claim 6, wherein said simultaneous view is presented in one of the following formats:

a tiled layout;

a cascaded layout; and

a one-at-a-time layout having operator selection to select a view.

15. A system to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said system comprising:

means for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

means for providing a simultaneous and consistent display representation for said selected application.

16. The system of claim 15, further comprising:

means for synchronizing said display representation when information in a device-independent portion of said formal description is changed.

17. An apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said apparatus comprising:

a layout generator for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

a layout manager for providing a simultaneous and consistent display representation for said selected application.

18. The apparatus of claim 17, wherein said layout generator further synchronizes said display representation when information in a device-independent portion of said formal description is changed.

19. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

a layout generator for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

a layout manager for providing a simultaneous and consistent display representation for said selected application.

20. The medium of claim 19, wherein said layout generator further synchronizes said display representation when information in a device-dependent portion of said formal description is changed.

21. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

providing a simultaneous and consistent display representation for said selected application, thereby providing a stylized rendering of said selected application's interface in a uniform appearance and in which said selected application's interface for a plurality of said target devices can selectively be viewed simultaneously.

22. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device

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characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

combining device characteristic information for said target device and a formal description information for said application; and

providing a stylized rendering of said application's interface.

23. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given stored in a memory a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

retrieving from said memory a device-independent specification information for a user interface for a selected application;

retrieving from said memory a device-dependent information for said selected application for a selected one or more of said target devices; and

combining said device-independent model information and said device-dependent information into a single format for a stylized representation on a display device.

24. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given stored in a memory a set

of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

means for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

means for providing a simultaneous and consistent display representation for said selected application.

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